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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

MAY 11 1998

SUBJECT: Ceiling Increase and a Change in the Scope of the Removal Activities at the Hereford Groundwater TCE Site (Crossley Farm) located in Huffs Church, Hereford Township, Berks County, Pennsylvania

FROM: Abraham Ferdas, Acting Division Director
Hazardous Site Clean-up Division (3HS00)

TO: Timothy R. Fields, Acting Assistant Administrator
Office of Solid Waste and Emergency Response (5101)

THRU: Stephen D. Luftig, Director
Office of Emergency and Remedial Response (5201)

ATTN: Thomas R. Sheckells, Director
Region 3/8 Accelerated Response Center(5201G)

I. ISSUE

The attached ceiling increase and change in removal scope action memorandum pertains to the Hereford Groundwater TCE Site located in Huffs Church, Hereford Township, Berks County, Pennsylvania. Attached is the CERCLA funding request Action Memorandum from the On-Scene Coordinator (OSC).

A site assessment conducted in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300, has identified buried drums at the Crossley Farm Site which are strongly suspected to be the source of groundwater contamination at the Site. Hazardous substances, including trichloroethylene, have been confirmed in residential groundwater wells around the Crossley Farm Site, and have also been confirmed in and around buried drums located on-site. These hazardous substances have directly impacted residential wells around the Crossley Farm Site and pose an imminent and substantial threat to human health, welfare, and the environment, due to the direct migration of hazardous substances into groundwater.

The OSC has determined that this Site meets the criteria for continuing a removal action under Section 300.415 of the NCP, and meets the emergency waiver criteria for the $2 million limitation for removal actions. Additional funds were requested and have been approved in the amount of $1,725,469, of which approximately

$1,656,349 are Regional Allowance Costs, to mitigate the threats posed by this site. The total project ceiling will be $2,698,444 of which $2,491,324 are extramural costs.

Pursuant to authority given under EPA Delegation of Authority 14-2-A to approve emergency waiver requests for actions costing more than $2 million and up to $6 million, Region III has approved this request for a ceiling increase and change in scope to the removal action at the Hereford Groundwater (Crossley Farm) TCE Site.

Attachment: Ceiling Increase and Change in Scope Action Memorandum

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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841 Chestnut Building
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MAY 11 1998

SUBJECT: Request for a Ceiling Increase and a Change in the Scope of the Removal Activities at the Hereford Groundwater Site (Crossley Farm Site) Located in Huff Church, Hereford Township, Berks County, Pennsylvania

FROM: Richard Fetzer, On-Scene Coordinator (OSC) Michael Fawcett for
Fund Removal Section (3HS31)

TO: Abraham Ferdas, Acting Division Director
Hazardous Site Clean-up Division (3HS00)

I. ISSUE

The purpose of this memorandum is to request a ceiling increase, an exemption from the $2 million statutory limitation, and a change in the scope of activities for the removal action. The Region III Removal Branch received a request from the Region III Remedial Program to further investigate the potential threat posed by hazardous substances allegedly buried at the Crossley Farm Site located in Huffs Church, Hereford Township, Berks County, Pennsylvania. A removal assessment, conducted in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300, has identified buried drums on-site and has confirmed trichloroethylene (TCE), Aroclor 1254, and lead contamination in the soil around these drums. It is strongly suspected that these drums are the source of TCE contamination at the Hereford Area Groundwater Site, also located in Huffs Church, Hereford Township, Berks County, Pennsylvania. Because these hazardous substances have directly impacted residential groundwater, which is documented over the past 11 years, they pose an imminent and substantial threat to human health, welfare, and the environment. The OSC has determined that this site meets the criteria for continuing a removal action under Section 300.415 of the NCP. Funds are needed immediately to mitigate the threat posed to public health or welfare or the environment by this site.

II. BACKGROUND

A. Site Description

The Crossley Farm Site is a partially wooded lot located on Huffs Church Road in Huffs Church, Hereford Township, Berks County, Pennsylvania. Approximately one-half of the site is an active dairy farm which includes a field utilized to grow corn and alfalfa. These products are used to feed the dairy cattle. A barn, trailers, and a man-made pond, approximately four acres in size, are located on the farm near Huffs Church Road. The remainder of the site includes approximately 200 residents located hydrogeologically downgradient of the farm (within two miles) and approximately 200 more residents located hydrogeologically upgradient of the farm (within ½ mile).

B. Site Background

Between the mid 1960's and the mid-1970's illegal waste disposal is reported to have occurred on the site. These reports included the burial of drums of TCE, a hazardous substance. In response to complaints from local residents regarding an unusual odor in their private water supply wells, the Pennsylvania Department of Environmental Resources (now known as the Pennsylvania Department of Environmental Protection (PADEP)) initiated a groundwater sampling program in 1983. This sampling program identified high levels of TCE (8,500 ppb) and tetrachloroethylene (PCE) (110 ppb) in private water wells. Groundwater use advisories were issued by PADEP at that time.

Early in 1984, EPA's Field Investigation Team (FIT) performed a site investigation of the Crossley Farm which was believed to be the source of groundwater contamination in Hereford Township. The site investigation conducted by FIT was unable to locate the source of groundwater contamination. Subsequently, FIT recommended that a regional groundwater study be performed to locate the source of groundwater contamination.

In 1986, in response to citizen complaints, an OSC from the EPA Removal Section conducted a residential well groundwater investigation of the area and identified TCE at a maximum level of 19,000 ppb and PCE at a maximum level of 500 ppb. The Removal Action Level (RAL) for TCE is 300 ppb.

In December 1986, an Action Memorandum was approved for $436,000 to provide bottled water to affected residents to eliminate the immediate threat to their health. Action was also initiated to obtain carbon filtration systems for these homes.

In early 1987, the EPA Removal Program installed carbon filtration systems in 12 residences identified with high levels of TCE and PCE. In November of 1991, residential well sampling south of the site identified additional homes with TCE contamination exceeding drinking water standards. Carbon filtration systems were installed in three more residences around the site bringing the total number of residences on carbon filtration systems to 15. It was determined at that time that a TCE plume was migrating in a southerly direction initiating from the vicinity of the Crossley Farm.

In December 1987, the EPA requested a waiver to the 12-month statutory exemption for removal actions based on the emergency criteria. The waiver was subsequently approved and maintenance for the 12 original carbon filtration systems and periodic sampling for those residences not receiving carbon filtration systems was provided.

On August 22, 1990, an additional funding request was approved for the Hereford Area Groundwater Site in the amount of $156,975 in order to continue to maintain the carbon filtration systems, supply bottled potable water, and continue groundwater sampling activities to monitor migration of the plume until the EPA Remedial Program could address the site.

On December 31, 1991, an additional funding request was approved for the Hereford Area Groundwater Site in the amount of $160,000 in order to continue to maintain carbon filtration systems, supply bottled potable water, and continue groundwater sampling activities to monitor migration of the plume until the EPA Remedial Program could address the site. The Crossley Farm Site was proposed for inclusion on the National Priorities List in July 1991.

On March 29, 1994, an additional funding request was approved for the Hereford Area Groundwater Site in the amount of $160,000 in order to continue to maintain carbon filtration systems, supply bottled potable water, and continue groundwater sampling activities to monitor migration of the plume until the EPA Remedial Program could address the site. The Crossley Farm Site was finalized for NPL inclusion in October 1992.

On July 28, 1995, an additional funding request was approved for the Hereford Area Groundwater Site in the amount of $60,000 in order to continue to maintain carbon filtration systems, supply bottled potable water, and continue groundwater sampling activities to monitor migration of the plume until the EPA Remedial Program could address the site.

As part of the on-going Remedial RI/FS, the RPM ordered historical aerial photography to be analyzed. This analysis showed the disturbance of areas on the Crossley Farm both in the 1960s and early 1980s. These areas were investigated by the EPA Remedial Program using geophysical analysis in the winter of 1996-1997. Following the identification of a significant electromagnetic anomaly and high levels of TCE in soil gas around this anomaly by the EPA Remedial Program, the OSC agreed to conduct a more detailed removal assessment of this area in accordance with the NCP. The OSC and RPM agreed that these areas should be investigated by digging test pits before any removal action was determined to be warranted. This removal assessment included a magnetometer survey, exploratory excavation activities, soil sampling, and buried waste sampling in and around the previously discovered electromagnetic anomaly. Preliminary excavation activities confirmed 14 buried drums containing waste materials and visibly discolored soil within 6 inches of the surface. Sampling activities conducted in and around these drums confirmed the presence of high concentrations of TCE in the soil. The buried drums and contaminated soil identified during this preliminary excavation activity are located in an agricultural field area utilized for the growth of corn and alfalfa. The excavation activity was conducted with a small back hoe and was preliminary in nature. It is strongly suspected that additional excavation activities would identify a significantly greater number of buried drums and additional TCE contamination.

C. Types of Substances Present

Analytical results continue to show high levels of TCE (360 to 8,200 ppb) in raw water samples from the wells of homes with carbon filters. Soil and buried drum waste samples confirm TCE in and around the buried drums confirmed on site. In addition, soil samples around these buried drums have confirmed Aroclor 1254, a polychlorinated biphenyl (PCB), and lead contamination above regulatory limits.

D. National Priorities List Status

The Crossley Farm Site was included on the NPL in 1991. An RI/FS was initiated in late 1992. The RI/FS is still in process with the focus of attention centering on groundwater investigation. A final decision regarding cleanup has not yet been determined.

E. State and Local Authorities' Roles

PADEP and the Pennsylvania Department of Health (PADOH) have provided background information pertaining to the site. The OSC will coordinate site activities with state and local officials.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a Removal Action. Paragraphs (b) (2) (I), (ii), (iii), (iv), (vi), and (vii) of Section 300.415 directly apply as follows to the conditions at the Crossley Farm Site:

A. 300.415 (b) (2) (i) "Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants."

Except for the mitigative actions taken by EPA, the nearby human population would have been exposed to TCE contamination through their drinking water since at least 1983 at levels exceeding the RAL. Fifteen (15) homes are currently utilizing carbon filtration systems, provided by EPA, to treat this contamination. The potential for further groundwater contamination of residential wells is possible since the probable source of contamination has not been mitigated and the plume of TCE contamination has not been remediated. The contaminant TCE is a hazardous substance which affects animals and humans and can migrate into the food chain with potentially carcinogenic effects.

TCE, Aroclor 1254, and lead contamination around buried drums in the soil of an agricultural field have been confirmed. This field is utilized to grow corn and alfalfa. It is possible that these plants could uptake TCE, Aroclor 1254, and/or lead and store it in their cells facilitating the contamination to the food grown on this portion of the property. The food is fed to dairy cattle raised on this farm.

B. 300.415 (b) (2) (ii) "Actual or potential contamination of drinking water supplies or sensitive ecosystems."

TCE contamination has been confirmed as a contaminant in residential drinking water wells around the Crossley Farm Site at levels exceeding drinking water standards. TCE contamination migration has been confirmed since 1983 and has been documented.

It is suspected that TCE will continue to migrate and affect additional households unless the source of this contamination is removed. The potential for this contamination to impact the drinking water supplies of additional residences is extremely high.

TCE contamination has been confirmed in the soils surrounding buried drums on the Crossley Farm site in conjunction with Aroclor 1254 and lead contamination of these soils. It is suspected that these buried drums are the source of the groundwater TCE contamination. Since Aroclor 1254 and lead contamination have also been confirmed in the soil around these drums, there is a potential for the migration of these contaminants and subsequent drinking water contamination. It should be noted that carbon filtration systems, which are currently utilized to effectively treat the TCE contamination at fifteen residences would be equally effective in treating PCBs. However, carbon filtration systems are not effective in the treatment of lead contamination.

C. 300.415 (b) (2) (iii) "Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release."

There is confirmation, through the recent removal assessment, that deteriorated buried drums are located on the site. These drums are associated with high levels of TCE, Aroclor 1254, and lead contamination in the soil. It is strongly suspected that these drums are releasing, and pose the threat of continued release, of TCE, Aroclor 1254, and lead into the surrounding soil and the groundwater.

These drums have been identified within 6 inches of the surface in an agricultural field. Plowing activities have, and could in the future, continue to significantly damage these already deteriorated drums intensifying the release of hazardous substances. Normal soil erosion could also expose drums over additional years of farming.

D. 300.415 (b) (2) (iv) "High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate."

TCE has been confirmed in soils within six inches of the surface at concentrations ranging from 16,000 to 30,000 ug/kg. Although these levels do not exceed regulatory limits, TCE was found in all six of the soil samples collected during the removal assessment conducted by the OSC. In addition, groundwater samples collected from the excavation trench showed TCE contamination at 110,000 ug/L. The Maximum Contaminant Level (MCL) for TCE in drinking water is 5 ug/L, and the RAL for TCE in drinking water is 300 ug/L.

In addition to the TCE contamination, Aroclor 1254 was found in soil within six inches of the surface at concentrations ranging from 160 to 150,000 ug/kg. The EPA Emergency Removal Guideline for Aroclor 1254 in residential soil is 16,000 ug/kg. Aroclor 1254 is a suspected carcinogen and is a hazardous substance pursuant to CERCLA.

Lead contamination was also confirmed in soil at concentrations ranging from 60.1 to 801 mg/kg. Two of the six soil samples collected during the removal assessment exceeded the 400 mg/kg Risk-Based Concentration screening level for lead in residential soil. The concentrations of lead for the two samples were 795 and 801 mg/kg. Lead is a heavy metal which has been linked to brain damage in children.

All of these contaminants are within six inches of the surface in an agricultural field which is actively used for growing corn and alfalfa. Plowing, harvesting, and other agricultural operations inherently disturb surface soils at and below this depth creating the potential for air migration and runoff migration of these contaminants through normal soil erosion processes.

E. 300.415 (b) (2) (vii) "The availability of other appropriate federal or state response mechanisms to respond to the release."

PADEP does not possess the resources to conduct a clean-up of the Crossley Farm Site. The agency has requested EPA assistance. Although the site is on the National Priority List (NPL), the EPA Remedial Branch has requested EPA Removal Branch assistance in mitigating the threat posed by these buried drums in a timely manner as an early action at an NPL site.

IV. ENDANGERMENT DETERMINATION

Actual and threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this Action Memorandum, will continue to present an

imminent and substantial endangerment to the public health, or welfare, or the environment.

If the source of this contamination is not removed, it is suspected that this source area of contamination will continue to degrade the local groundwater and contribute to the size of the TCE plume potentially impacting more residences located in the area. In addition, it is possible that Aroclor 1254 and lead contamination will also migrate into these areas if not mitigated at the source.

V. EXEMPTION FROM STATUTORY LIMITS

The Crossley Farm Site meets the emergency exemption criteria in Section 104(c) of CERCLA, 42 U.S.C. Section 9604 (c), to exceed the $2 million statutory limit for the removal action.

Section 104(c)(1)(A)(i) "Continued response actions are immediately required to prevent, limit, or mitigate an emergency".

The focus of past and current removal actions has been to provide bottled water, maintain carbon filtration systems for approximately 15 residences affected by the area TCE groundwater contamination, and periodic sampling to monitor the plume of TCE contamination. As a result of the request for assistance from the EPA Remedial Program to further investigate the discovered source of groundwater contamination, it was determined through extensive geophysical studies, exploratory tests pits, and sampling data the approximate location of the source of the area groundwater contamination. These studies revealed the presence of buried drums as well as contamination of surrounding soils with TCE, PCBs, and lead. In order to alleviate further degradation of the local groundwater, this potential source of contamination should be mitigated as soon as possible.

Section 104 (c)(1)(A)(ii) "There is an immediate risk to public health or welfare or the environment".

If the source of area groundwater contamination is not alleviated in a timely manner, it is strongly suspected the source will continue to leach contamination into groundwater and potentially affect additional residences located downgradient from the location of the buried drums. Approximately 200 people live hydrogeologically downgradient from the Crossley Farm Site. Moreover, the field is currently used to grow crops to feed dairy cattle. As a result of on-site activities, there exists potential for surface erosion exposing the buried drums. This

situation presents a direct contact threat to trespassers since the site is not secured.

Section 104 (c)(1)(A)(iii) "Assistance will not otherwise provided on a timely basis".

PADEP does not currently have adequate resources to expend at the Crossley Farm Site to mitigate the potential risks. They have requested EPA's involvement to remove the buried drums located on-site. Moreover, although the site is on the NPL, the EPA Remedial Program is currently conducting an RI/FS and a long-term remedy has not been selected. Therefore, neither PADEP nor EPA's Remedial Program is able to address the potential risks posed by the buried drums.

VI. PROPOSED ACTIONS and ESTIMATED COSTS

A. Actions

The actions proposed for the Crossley Farm Site are designed to remove all of the buried drums of hazardous substances on the site and potentially eliminate the source of the TCE groundwater contamination in the Hereford area. This action will eliminate the imminent threat posed by this site to human health, welfare, and the environment. The proposed actions are as follows:

* Continue to maintain the carbon filtration systems, perform periodic sampling, and provide bottled water as necessary.

* Prepare site for access by construction equipment and restrict site access as necessary to protect public health.

* Conduct excavations in order to remove any containers of buried hazardous substances or potential pollutants and/or contaminants.

* Sample and analyze the soils surrounding the excavation in order to determine the extent of soil contamination and sample additional potential buried drum areas.

* Remove all contaminated soil and replace that soil with clean fill.

* Categorize and characterize any containers found as to the degree and type of contamination.

* Prepare the materials for storage and transportation to an appropriate disposal facility.

* Arrange for treatment and/or disposal of the materials.

B. Estimated Costs

	Current Ceiling	Proposed Ceiling
Extramural Costs		
Regional Allowance Costs		
ERCS	$609,975	$2,057,984
Non-Regional Allowance Costs		
TAT	225,000	433,340
Total Extramural	$834,975	$2,491,324
Intramural Costs		
Direct Costs	$ 45,000	$ 79,560
Indirect Costs	75,000	109,560
ERT/HQ	18,000	18,000
Total Intramural	$138,000	$ 207,120
Estimated Total Project Ceiling	$972,975	$2,698,444

C. Contribution to Remedial Performance

The Crossley Farm Site is currently on the NPL. The actions proposed in this funding request will aid and expedite the remedial performance and will not hinder any future actions at this site. The removal action is not inconsistent with any proposed future remedial action.

D. Compliance with ARARs

The proposed removal action set forth in this memorandum will comply with all Applicable and Relevant and Appropriate environmental and health requirements (ARARs), to the extent practicable, considering the exigencies of the situation. The OSC sent PADEP a letter on April 10, 1998 and is currently awaiting a list of ARARs. PADEP responded on April 17, 1998 and listed various ARARs and cleanup values. The OSC will make every effort to comply with these ARARs, while meeting all applicable Federal requirements.

VII. EXPECTED CHANGE IN THE SITUATION SHOULD NO ACTION BE TAKEN OR ACTION DELAYED

The contents of the confirmed buried drums, as well as the confirmed soil contaminants, will continue to migrate into the surrounding wells supplying water to local residents. The agricultural activities on the site may cause disturbances to the buried drums which may subsequently expedite the release of hazardous substances into the environment. The possibility of human contact and exposure to hazardous materials through the food chain is also a possibility.

Although currently active carbon filtration systems are a temporary solution to the threat posed by this site, it is suspected that TCE continues to migrate into the groundwater from the area of buried drums identified in December of 1997. In addition, carbon filtration systems are ineffective for the treatment of lead contamination. It is suspected that lead is and will continue to migrate from the area of buried drums and will impact the surrounding residential wells. In order to address the threat posed by this site, and to prevent the continued expansion and migration of the contamination plumes, this contamination source should be eliminated.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues associated with the Crossley Farm site.

IX. ENFORCEMENT

The U.S. EPA Region III Enforcement Section has been provided with all background information available to pursue any and all Enforcement Actions pertaining to the Crossley Farm Site. See the attached confidential Enforcement documents for further information regarding the site.

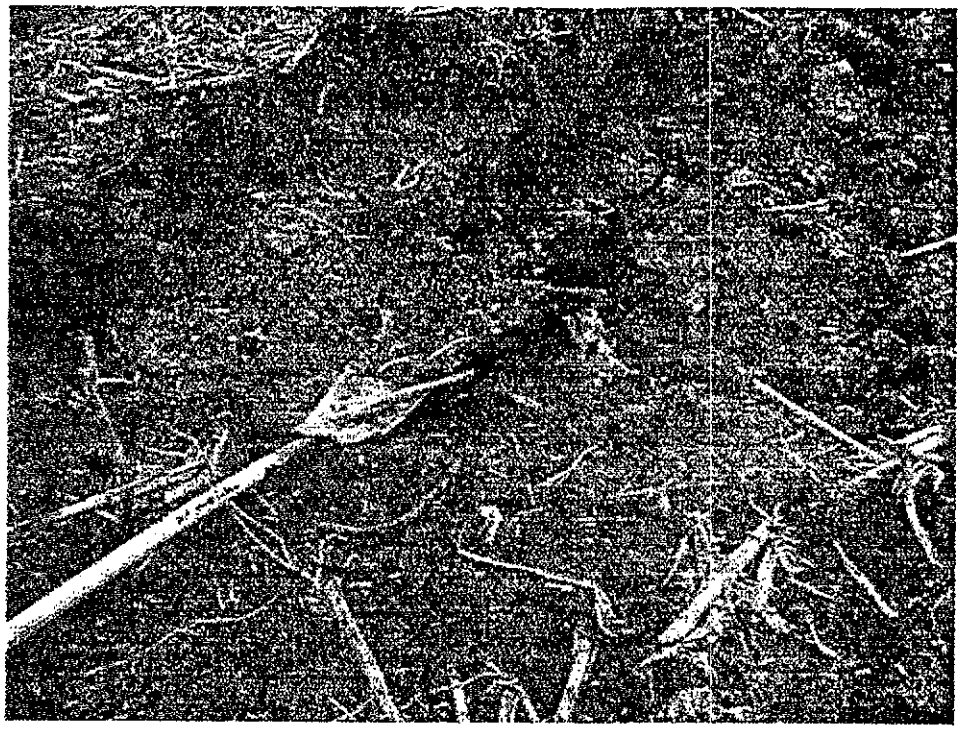
X. RECOMMENDATION

Because the conditions at the Crossley Farm site meet the NCP Section 300.415 criteria for a Removal Action, I recommend your approval of this request for $1,725,469 of which approximately $1,656,349 are Regional Allowances Costs. Please indicate your approval or disapproval by signing below. I recommend your approval to initiate response actions because of the nature of the threat described herein.

Approved: Allen Fenn Date: 5/7/98

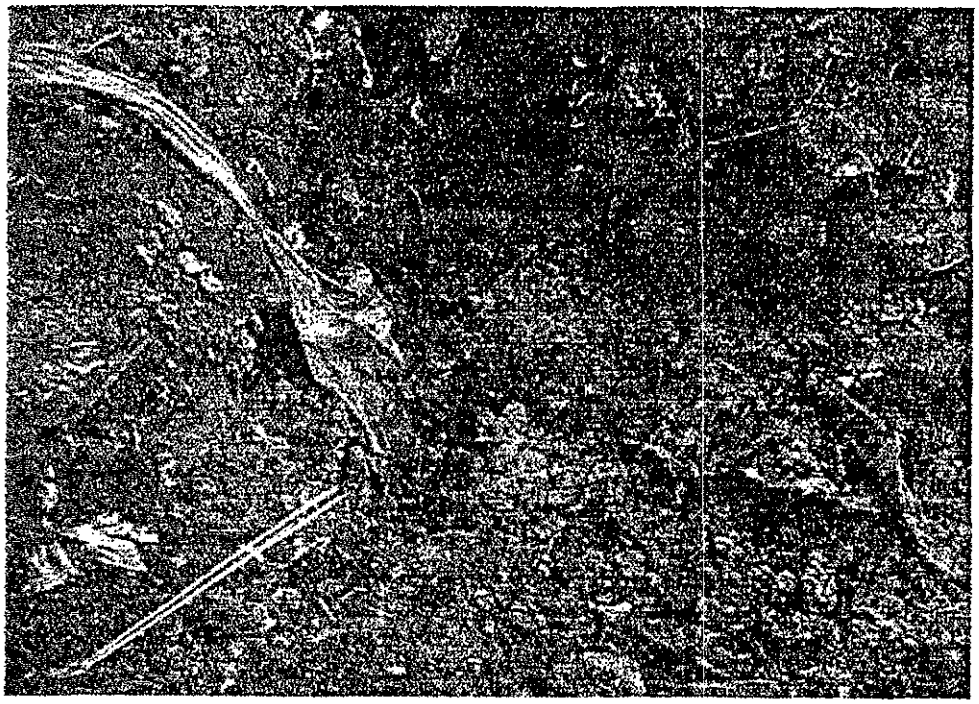
Disapproved: _____ Date: _____

Attachments: Confidential Enforcement Documents
Site Photographs
July 1995 Action Memorandum
March 1994 Action Memorandum
December 1991 Action Memorandum
August 1990 Action Memorandum
December 1987 Action Memorandum
December 1986 Action Memorandum

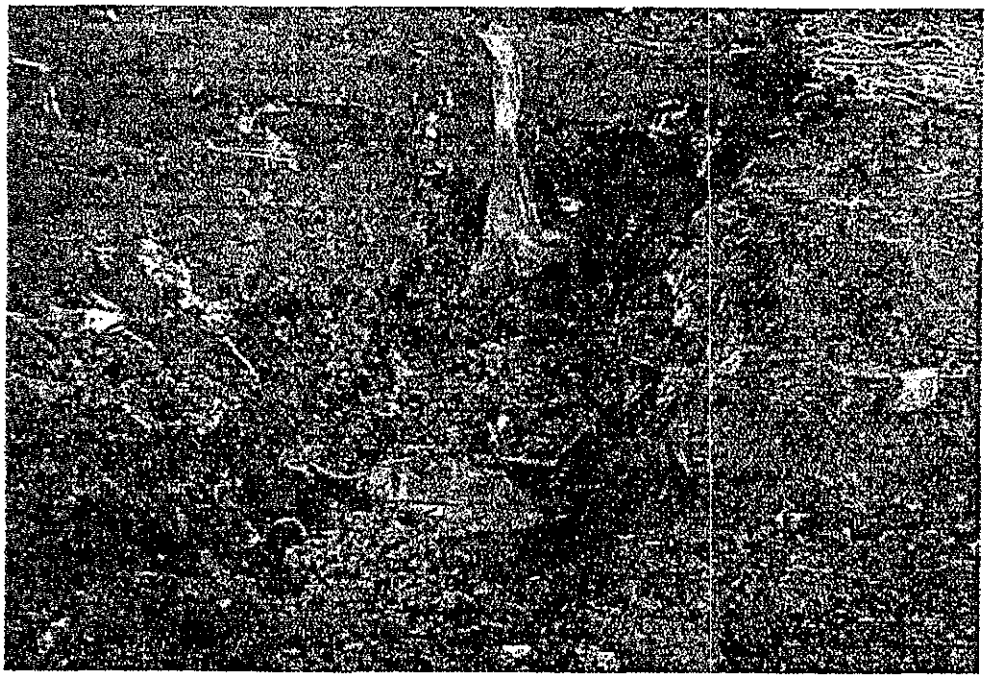


Shovel prying buried drum open

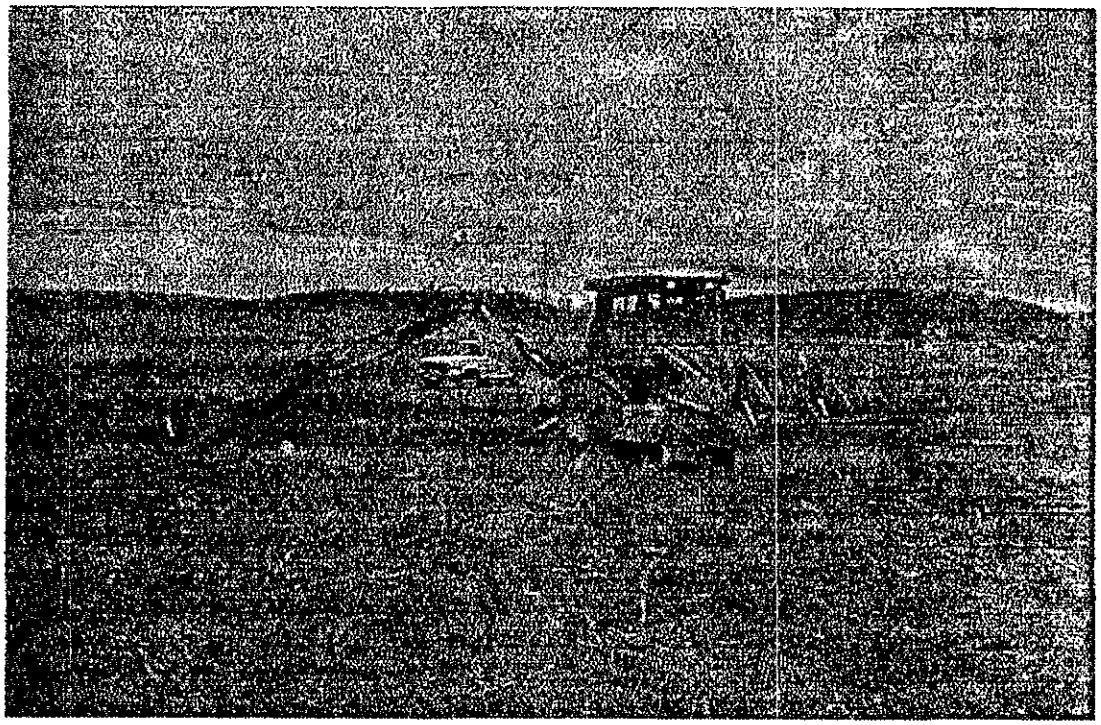
A drum carcas found containing material



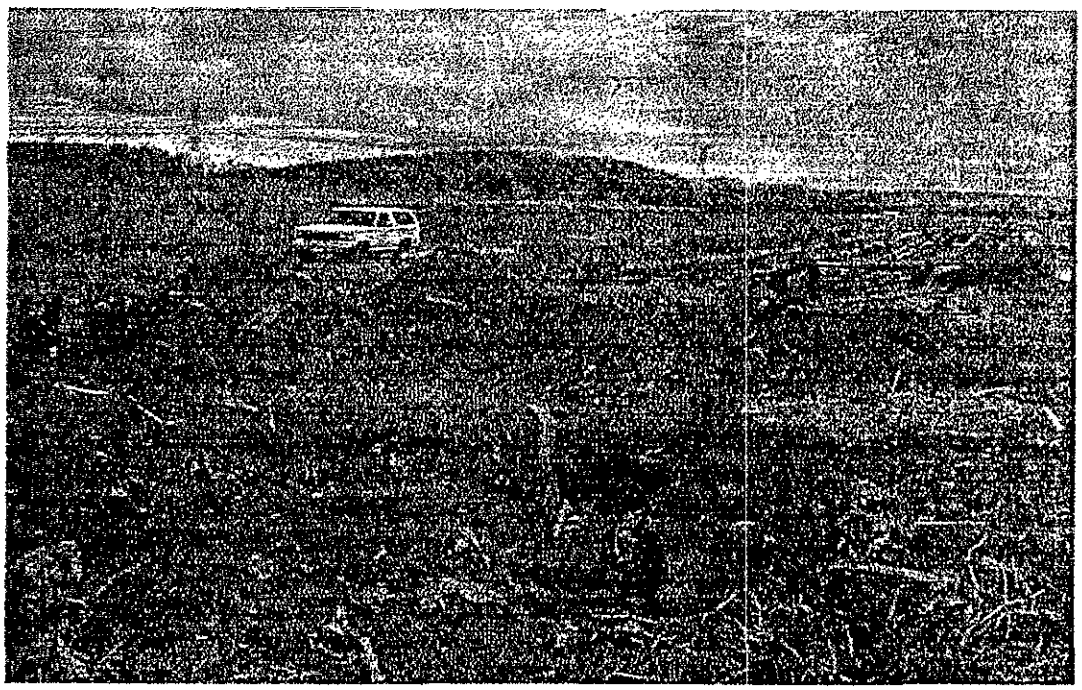
Stained soil in pit with drums



Different view of stained soil and drums



Panoramic view of field toward the northeaast



Panoramic view of field toward the southeast

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

JUL 2 6 1995

SUBJECT: Request for Additional Funds for Removal Action at the Hereford Ground Water NPL Site (Crossley Farms Site) Hereford Township, Berks County, Pennsylvania

FROM: Jack Owens, On-Scene Coordinator Jack Owens
Eastern Response Section (3HW31)

TO: Thomas C. Voltaggio, Director
Hazardous Waste Management Division (3HW00)

THRU: Abraham Ferdas, Associate Director
for Superfund Programs (3HW02) Abraham Ferdas

I. ISSUE

The purpose of this Action Memorandum is to request additional funds to continue removal actions at the Hereford Ground Water NPL Site, (Crossley Farms Site), Hereford Township, Berks County, Pennsylvania. Hazardous substances have been detected in the ground water and have contaminated drinking water wells of 25 homes.

Additional funds in the amount of $60,000 are needed to continue to provide bottled water to the affected residences, and to operate and maintain the carbon filter systems already in place. This increase will raise the total project ceiling from $912,975 to $972,975.

Additional funds for the continued maintenance of filtration systems and periodic sampling are required until a permanent Remedial Action is instituted. The site was placed on the National Priorities List on 7-21-91.

II. BACKGROUND

A. Site Description

Hereford Township has an estimated population of 3,016 residents, and is located in eastern Berks County, approximately 60 miles northwest of Philadelphia, Pennsylvania. The nearest industries to the site are located in Bally, Pennsylvania, approximately 5 miles southeast of the Site.

B. Site Background

In November 1983, in response to citizen complaints of degraded water quality in Hereford Township, tap water samples were taken by the Pennsylvania Department of Environmental Resources (PADER) personnel and EPA's Technical Assistance Team (TAT). Results revealed high levels of trichloroethylene (TCE) in the samples. Six of the eight samples collected had TCE levels that exceeded the Drinking Water Equivalent Level (DWEL). All residences in the area use private wells for their water supply.

PADER's Norristown office issued advisories in 1983 regarding water usage. These advisories recommended using bottled water, or boiling water, or installing carbon filters where TCE concentrations exceeded 45 ppb, and discontinuing the use of untreated water for drinking purposes where TCE levels exceeded 100 ppb.

Early in 1984, EPA's Field Investigation Team (FIT) performed a site investigation of the Crossley Farm, thought to be the source of contamination in Hereford. The site investigation by FIT was unable to locate the source of contamination; FIT recommended that a regional ground water study be performed.

The EPA Removal Section reassessed the area in September 1986 after a complaint from a citizen about the continuing degraded water quality. Tap water samples were taken and levels of TCE ranging from 500 to 19,000 ppb were detected. The DWEL is 300 ppb for TCE.

In December 1986, an Action Memorandum was approved for $466,000 to provide bottled water to affected residents to eliminate the immediate threat to their health and welfare. Action was also initiated to obtain carbon filtration systems for affected residents.

In January 1987, installation of Culligan carbon filtration units began under EPA supervision. The installation of Sanatoga carbon filter systems began in February 1987. A total of 15 residences currently have filter systems maintained by USEPA.

In November of 1993, testing of residential wells south of the Site revealed three additional residences with TCE contamination exceeding drinking water standards. The plume is moving in a southerly direction from the site, and the risk to human health makes it imperative that continued emergency response actions be taken to ensure that no additional families are placed at risk from ingestion of TCE-contaminated drinking water.

To date, the EPA has sampled all residences within the site area on a routine basis to ensure the integrity of the filter systems, has provided bottled water to one residence, and has provided replacement and routine maintenance of the carbon filtration systems.

C. Types of Hazardous Substances Present

Analytical results continue to show high levels of TCE (360-8,200 ppb) in the wells of homes with filters. The operation and maintenance of the installed filter systems as a temporary solution is necessary to provide safe drinking water to the residents.

In 1993 routine testing of wells downgradient of the site by Region III Technical Assistance Team (TAT) revealed three additional residential water wells with high concentrations of TCE above Action Level Guidelines. Water filtration units were installed at these residences. TCE is a hazardous substance as defined in Section 101(14) of CERCLA.

D. National Priorities List Status

On July 21, 1991 the Site was placed on the National Priorities List (#147). Plans to finalize a Record of Decision are in progress.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a Removal Action. Paragraphs (b) (2) (i), (ii), and (vii) of section 300.415 directly apply to the conditions at the Hereford Ground Water Site as follows:

A. 300.415 (b) (2) (i) "Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants."

The nearby human population has continually been exposed to the TCE contamination through their drinking water for a long period of time at levels exceeding Removal Action Guidelines. Trichloroethylene is a hazardous substance which affects animals and humans, and can migrate into the food chain with potentially carcinogenic effects.

B. 300.415 (b) (2) (ii) "Actual or potential contamination of drinking water supplies or sensitive ecosystems."

Trichloroethylene is in ground water at concentrations exceeding Drinking Water Standards. TCE has migrated underground and contaminated additional drinking water supplies. Recent testing has confirmed that the contaminated ground water plume continues to advance in a southerly direction from the site.

C. 300.415 (b) (2) (vii) "The availability of other appropriate Federal or State response mechanisms to respond to the release."

The site is presently on the National Priority List (NPL). Continued removal response actions are necessary until Remedial Actions are selected and implemented. This has always been a federal-lead project and is expected to remain so.

D. Compliance with ARARS

The proposed Removal Actions set forth in this memorandum will comply with all applicable and relevant and appropriate environmental and health requirements, to the extent practicable, considering the exigencies of the situation.

This Removal Action is not meant to achieve ground water cleanup ARAR's, but only to supply safe drinking water in accordance with the requirements of the Safe Drinking Water Act, 42 U.S.C. §§ 300f et seq.

E. State and Local Authorities' Role

State and local agency involvement has been limited to community awareness and emergency response support.

IV. PROPOSED ACTIONS AND COSTS

Until a permanent Remedial Action is undertaken, it is necessary to continue to supply the affected residents with a temporary, potable water supply (bottled water), to maintain the carbon filtration systems already installed, and to monitor wells in the area for TCE levels. All responses at this Site are consistent with expected Remedial Actions, and will not hinder any future responses at this site.

SUMMARY OF COSTS	Current Ceiling	Proposed Ceiling
Extramural Costs		
ERCS Contractor	$569,975	$609,975
TAT	215,000	225,000
Extramural Subtotal	$784,975	$834,975
Intramural Costs		
EPA Direct	$ 35,000	$ 45,000
EPA Indirect	75,000	75,000
ERT/HQ.	18,000	18,000
Intramural Subtotal	$128,000	$138,000
Total Project Ceiling	$912,975	$972,975

V. RECOMMENDATION

An identification of the hazardous substances found at the site, and a description of how the site meets the response criteria in 40 CFR 300.415 is fully described in the OSC's earlier request for funding, dated 1994. (attached). Because conditions at the Hereford Groundwater Site continue to meet the criteria set forth in 40 C.F.R. 300.415 of the National Oil and Hazardous Substance Pollution Contingency Plan, I recommend your approval of the proposed ceiling increase of $60,000. The total project ceiling if approved will be $972,975 of which $834,975 are extramural costs.

APPROVAL _____ DATE 7/26/95

DISAPPROVAL _____ DATE _____

Attachment: 1994 Additional Funding Memo

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

MAR 29 1994

SUBJECT: Request for Additional Funds
Hereford Ground Water NPL Site, Crossley Farms Site,
Hereford Township, Berks County, Pennsylvania

FROM: Jack Owens, On-Scene Coordinator
Eastern Response Section (3HW31)

TO: Stanley L. Laskowski
Acting Regional Administrator (3RA00)

THRU: Abraham Ferdas, Associate Division Director
for Superfund Programs (3HW02)

I. ISSUE

The purpose of this memorandum is a request for additional funds to continue removal actions at the Hereford Ground Water NPL Site, Crossley Farms Site, Hereford Township, Berks County, Pennsylvania. Hazardous substances have been detected in the ground water and have contaminated drinking water wells of at least 25 homes.

Additional funds in the amount of $160,000 are needed to provide bottled water to the affected residences, and to operate and maintain the carbon filter systems already in place. This increase will raise the total project ceiling from $752,975 to $932,975.

Monies for the continued maintenance of filtration systems and periodic sampling are included for two years. The site was placed on the National Priorities List (NPL) on 7-21-91.

II. BACKGROUND

A. Site Description

Hereford Township has an estimated population of 3,016 residents, and is located in eastern Berks County, approximately 60 miles northwest of Philadelphia, Pennsylvania. The nearest industries to the site are located in Bally, Pennsylvania, approximately 5 miles southeast of the Township.

B. Site Background

In November 1983, in response to citizen complaints about the water quality in Hereford Township, tap water samples were taken by the Pennsylvania Department of Environmental Resources (PADER) personnel and EPA's Technical Assistance Team (TAT). Results revealed high levels of trichloroethylene (TCE) in the samples. Six of the eight samples collected had TCE levels that exceeded the Drinking Water Equivalent Level (DWEL). All residences in the area use private wells for their water supply.

PADER's Norristown office issued advisories in 1983 regarding water usage. These advisories recommended using bottled water, or boiling water, or installing carbon filters where TCE concentrations exceeded 45 ppb, and discontinuing the use of untreated water for drinking purposes where TCE levels exceeded 100 ppb.

Early in 1984, EPA's Field Investigation Team (FIT) performed a site investigation of the Crossley Farm, thought to be the source of contamination in Hereford. The site investigation by FIT was unable to locate the source of contamination; FIT recommended that a regional ground water study be performed.

The EPA Removal Section reassessed the area in September 1986 after a complaint from a citizen about the continuing degraded water quality. Tap water samples were taken and levels of TCE ranging from 500 to 19,000 ppb were detected. The DWEL is 300 ppb for TCE.

In December 1986, an Action Memorandum was approved for $466,000 to provide bottled water to affected residents to eliminate the immediate threat to their health and welfare. Action was also initiated to obtain carbon filtration systems.

In January 1987,installation of Culligan carbon filtration units began under EPA supervision. The installation of Sanatoga carbon filter systems began in February 1987. A total of 15 residences currently have filter systems.

In November of 1993, testing of residential wells south of the Site revealed three additional residences with TCE contamination exceeding drinking water standards. The plume is moving in a southerly direction from the site, and the risk to human health makes it imperative that continued emergency response actions be taken to ensure that no additional families are placed at risk from ingestion of TCE-contaminated drinking water.

To date, the EPA has sampled all residences within the site area on a routine basis to ensure the integrity of the filter systems, provides bottled water to one residence, and provides replacement and routine maintenance of all carbon filtration systems.

C. Types of Hazardous Substances Present

Analytical results continue to show high levels of TCE (360-8,200 ppb) in the wells of homes with filters. The operation and maintenance of the installed filter systems as a temporary solution is necessary to provide safe water to the residents.

1993 routine testing of wells downgradient of the site by Region III Technical Assistance Team (TAT) revealed three additional residential water wells with high concentrations of TCE above Action Level Guidelines. Water filtration units were installed at these residences. TCE is a hazardous substance as defined in Section 101(14) of CERCLA.

D. National Priorities List Status

On July 21, 1991 the Site was placed on the National Priorities List (#147). Plans to initiate the RI/FS are in progress.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a Removal Action. Paragraphs (b) (2) (i), (ii), and (vii) of section 300.415 directly apply to the conditions at the Hereford Ground Water Site as follows:

A. 300.415 (b) (2) (i) "Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants."

The nearby human population has continually been exposed to the TCE contamination through their drinking water for a long period of time at levels exceeding Removal Action Guidelines. Trichloroethylene is a hazardous substance which affects animals and humans and can migrate into the food chain with potentially carcinogenic effects.

B. 300.415 (b) (2) (ii) "Actual or potential contamination of drinking water supplies or sensitive ecosystems."

Trichloroethylene is in ground water at concentrations exceeding Drinking Water Standards. TCE has migrated underground and contaminated additional water supplies. Recent testing has confirmed that the contaminated ground water plume is moving in a southerly direction from the site.

C. 300.415 (b) (2) (vii) "The availability of other appropriate Federal or State response mechanisms to respond to the release."

The site is presently on the National Priority List (NPL). Continued removal response actions are necessary until Remedial Actions are selected and implemented.

D. Compliance with ARARS

The proposed Removal Actions set forth in this memorandum will comply with all applicable and relevant and appropriate environmental and health requirements, to the extent practicable, considering the exigencies of the situation.

This Removal Action is not meant to achieve ground water cleanup ARAR's, but only to supply safe drinking water supplies.

E. State and Local Authorities' Role

State and local agency involvement has been limited to community awareness and emergency response support. They expect us to continue response actions.

IV. PROPOSED ACTIONS AND COSTS

Until the site is addressed by the Remedial Program, it is necessary to continue to supply the affected residents with a temporary, potable water supply (bottled water), to maintain the carbon filtration systems already installed, and to monitor wells in the area for TCE levels. All responses at this Site are consistent with expected Remedial Actions, and will not hinder any future responses at this site.

SUMMARY OF COSTS	Current Ceiling	Additional Funds	New Ceiling
Extramural Costs			
ERCS Contractor	$469,975	$100,000	$569,975
TAT	190,000	25,000	215,000
Extramural Subtotal	$659,975	$125,000	$784,975
Intramural Costs			
EPA Direct	$25,000	$10,000	$35,000
EPA Indirect	50,000	25,000	75,000
ERT/HQ.	18,000	0	0
Intramural Subtotal	$ 93,000	$ 35,000	$128,000
Total Project Ceiling	$752,975	$160,000	$912,975

V. REGIONAL RECOMMENDATION

The program has already been granted a 12-month exemption by the Assistant Administrator. An identification of the hazardous substances found at the site, and a description of how the site meets the response criteria in 40 CFR 300.415 is fully described in the OSC's earlier request for funding, dated December 31, 1991. (attached). To assist in eliminating the continuing threat posed to the public and the environment, consistent with the removal criteria contained in the NCP, 40 CFR 300.415, I recommend your approval of this $160,000 ceiling increase which will raise the total project ceiling from $752,975 to $912,975 of which $784,975 are Regional Allowance costs. You may indicate your approval or disapproval by signing below.

APPROVAL _____ DATE 3-28-94

DISAPPROVAL _____ DATE _____

Attachment: December 31, 1991 Additional Funding Memo

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

DEC 31 1991

SUBJECT: Request for Additional Funds
Hereford Ground Water Site, Hereford Township,
Berks County, Pennsylvania

FROM: Jack Owens, On-Scene Coordinator
Eastern Response Section (3HE31)

TO: Edwin B. Erickson
Regional Administrator (3RA00)

THRU: Abraham Ferdas, Associate Division Director
for Superfund Programs (3HW02)

I. ISSUE

This is a request for additional funds to continue removal actions at the Hereford Ground Water Site, Hereford Township, Berks County, Pennsylvania. Hazardous substances have been detected in the ground water and have contaminated the private wells of at least 25 homes.

Additional funds in the amount of $160,000 for Regional Allowance Costs, will be needed to continue to provide bottled water to the affected residences, and to operate and maintain the carbon filter systems already in place. This increase will raise the total project ceiling from $592,975 to $752,975.

Monies for maintenance and periodic sampling are included for one year. The site is proposed for the National Priorities List (NPL).

II. BACKGROUND

A. Site Description

Hereford Township with and estimated population 3,016, is located in eastern Berks County, approximately 60 miles northwest of Philadelphia, Pennsylvania. The nearest industries to the site are located in Bally, Pennsylvania, approximately 5 miles southeast of the Township.

B. Site Background

In November 1983, in response to citizen complaints about the water quality in Hereford Township, tap water samples were taken by the Pennsylvania Department of Environmental Resources (PADER) personnel and EPA's Technical Assistance Team (TAT). Results revealed high levels of trichloroethylene (TCE) in the samples. Six of the eight samples collected had TCE levels that exceeded the Drinking Water Equivalent Level (DWEL). All residences in the area use private wells for their water supply.

PADER's Norristown office issued advisories in 1983 regarding water usage. These advisories recommended using bottled water, or boiling water, or installing carbon filters where TCE concentrations exceeded 45 ppb, and discontinuing the use of untreated water for drinking purposes where TCE levels exceeded 100 ppb.

Early in 1984, EPA's Field Investigation Team (FIT) performed a site investigation of the Crossley Farm, thought to be the source of contamination in Hereford. The site investigation by FIT was unable to locate the source of contamination, FIT recommended that a regional ground water study be performed.

The EPA Removal Section reassessed the area in September 1986 after a complaint from a citizen about the continuing water quality problem. Four tap water samples were taken and levels of TCE ranging from 500 to 19,000 ppb were detected. The DWEL is 300 ppb for TCE.

In December 1986, an Action Memorandum was approved for $466,000 to provide bottled water to affected residents to eliminate the immediate threat to their health and welfare. Action was also initiated to obtain carbon filtration systems.

In January 1987, installation of Culligan carbon filtration units began under EPA supervision. The installation of Sanatoga carbon filter systems began in February 1987. A total of 12 residences currently have filter systems.

In November of 1991, testing of residential wells south of the site revealed three additional residences with TCE contamination exceeding drinking water standards. The plume is moving in a southerly direction from the site, and the risk to human health makes it imperative that continued emergency response actions be taken to ensure that no additional families are placed at risk from ingestion of TCE-contaminated drinking water.

To date, the EPA has sampled all residences within the site area on a routine basis to ensure the integrity of the filter systems, provided bottled water to affected residences, and provided routine maintenance of all carbon filtration systems.

C. Types of Substances Present

Analytical results continue to show high levels of TCE (360-8,200 ppb) in the wells of homes with filters. The operation and maintenance of the installed filter systems as a temporary solution is necessary to provide safe water to the residents.

Recent routine testing of wells downgradient of the site by Region III Technical Assistance Team (TAT) has revealed three additional residential water wells with high concentrations of TCE above Action Level Guidelines.

D. National Priorities List Status

The site has recently been proposed for the National Priorities List (NPL). A Remedial Investigation/Feasibility Study (RI/FS), is projected to begin in late 1992.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of a Removal Action. Paragraphs (b) (2) (i), (ii), and (vii) of section 300.415 directly apply to the conditions at the Hereford Ground Water Site as follows:

A. 300.415 (b) (2) (i) "Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants."

The nearby human population has continually been exposed to the TCE contamination through their drinking water for a long period of time at levels exceeding Removal Action Guidelines. Trichloroethylene is a hazardous substance which affects animal and humans and can migrate into the fodchain with potentially carceinogenic effects.

B. 300.415 (b) (2) (ii) "Actual or potential contamination of drinking water supplies or sensitive ecosystems."

Trichloroethylene (TCE) is in ground water at concentrations exceeding Drinking Water Standards. TCE has migrated underground and contaminated additional water supplies. Recent testing has confirmed that the contaminated ground water plume is moving in a southerly direction from the site.

C. 300.415 (b) (2) (vii) "The availability of other appropriate Federal or State response mechanisms to respond to the release."

The site is presently proposed for the National Priority List (NPL). Continued emergency response actions are necessary until Remedial Actions are selected and implemented.

D. Compliance with ARARS

The proposed Removal Actions set forth in this memorandum will comply with all applicable and relevant and appropriate environmental and health requirements, to the extent practicable, considering the exigencies of the situation.

E. State and Local Authorities' Role

State and local agency involvement has been limited to community awareness and emergency response support.

IV. PROPOSED ACTIONS AND COSTS

The OSC has determined that until the site is addressed by the Remedial Program, it is necessary to continue to supply the affected residents with a temporary, potable water supply (bottled water), to maintain the carbon filtration systems already installed, and to monitor wells in the area for TCE levels. All actions taken during the emergency response will aid the Remedial performance, and will not hinder any future responses at this site.

SUMMARY OF COSTS	Current Ceiling	Additional Funds	New Ceiling
Extramural Costs			
ERCS Contractor	$288,975	$110,000	$398,975
TAT	178,000	25,000	203,000
Extramural Subtotal	$466,975	$135,000	$601,975
Intramural Costs			
EPA Direct	$25,000	$10,000	$35,000
EPA Indirect	55,000	15,000	70,000
ERT/HQ.	18,000	0	18,000
Intramural Subtotal	$ 98,000	$ 25,000	$123,000
Unallocated Funds	28,000	0	28,000
Total Project Ceiling	$592,975	$160,000	$752,975

V. REGIONAL RECOMMENDATION

The program has already been granted a 12-month exemption by the Assistant Administrator. An identification of the hazardous substances found at the site, and a description of how the site meets the response criteria in 40 CFR 300.415 (formerly 300.65) is fully described in the OSC's earlier request for funding, dated August 22, 1990 (attached). To assist in eliminating the continuing threat posed to the public and the environment, consistent with the removal criteria contained in the NCP, 40 CFR 300.415 , I recommend your approval of this $160,000 increase for extramural contractor costs. Your approval will raise the total project ceiling from $592,975 to $752,975 of which $601,975 is for Regional Allowance costs. You may indicate your approval or disapproval by signing below.

APPROVAL Edwin B. Erickson DATE DEC 31 1991

DISAPPROVAL _____ DATE _____

Attachment: 1990 Additional Funding Memo

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

AUG 22 1990

SUBJECT: Request for Additional Funds for the Removal Actions at the Hereford Township Ground Water Site, Hereford Township, Berks County, Pennsylvania

FROM: Jack Owens, On-Scene Coordinator
Eastern Response Section (3HW31)

TO: Edwin B. Erickson
Regional Administrator (3RA00)

THRU: Abraham Ferdas, Acting Director
Office of Superfund (3HW02)

I. ISSUE

This is a request for additional funds to continue removal actions at the Hereford Ground Water Site, Hereford Township, Berks County, Pennsylvania. Hazardous substances have been detected in the ground water and have contaminated the private wells of at least 22 homes.

Additional funds in the amount of $156,975 for extramural contractor costs, will be utilized to continue to provide bottled water to the affected residences, and to operate and maintain the carbon filter systems already in place. This increase will raise the total project ceiling from $436,000 to $592,975.

Monies for maintenance and periodic sampling are included for one year in anticipation of the site being placed on the National Priorities List (NPL) and becoming a candidate for remedial action.

II. BACKGROUND

Hereford Township (population estimated at 3016) is located in eastern Berks County, approximately 60 miles northwest of Philadelphia, Pennsylvania. The nearest industries to the site are located in Bally, Pennsylvania, approximately 5 miles southeast of the Township.

In November 1983, in response to citizen complaints about the water quality in Hereford Township, tap water samples were taken by Pennsylvania Department of Environmental Resources (PA DER) personnel and EPA's Technical Assistance Team (TAT). Results revealed high levels of trichloroethylene (TCE) in the samples. Six of the eight samples collected had TCE levels that exceeded the Drinking Water Equivalent Level (DWEL). All residences in this area use private wells for their water supply.

PA DER's Norristown office issued advisories in 1983 regarding water usage. These advisories recommended using bottled water, or boiling water, or installing carbon filters where TCE concentrations exceeded 45 ppb, and discontinue the use of untreated water where TCE levels exceeded 100 ppb for drinking purposes.

Early in 1984, the Field Investigation Team (FIT) performed a site assessment of the Crossley Farm, thought to be the source of contamination in Hereford. Unable to locate the source, FIT suggested that a regional ground water study be performed.

EPA Removal reassessed the area in September 1986 after a complaint from a citizen concerning the continuing water quality problem. Four tap water samples were taken and levels of TCE ranging from 500 to 19,000 ppb were detected. The DWEL is 300 ppb for TCE.

In December 1986, an Action Memorandum was approved for $436,000 to provide bottled water to affected residents to eliminate the immediate threat to their health and welfare. Action was also initiated to obtain carbon filtration systems.

In January 1987, installation of Culligan carbon filtration units began under EPA supervision. The installation of Saratoga carbon filter systems began in February 1987. A total of 12 residences currently have filter systems. All of the filters were installed by May 1987.

The OSC requests these additional funds to continue the provision of bottled water and the operation and maintenance of filter systems until the situation can be addressed by the Remedial Branch program. These will also be used to continue to sample other potentially affected residences.

Analytical results continue to show high levels of TCE (360-8200 ppb) in homes with filters. The operation and maintenance of the installed filter systems as a temporary solution is necessary to provide safe water to the residents.

III. PROPOSED ACTIONS

The OSC has determined that until the site is addressed by the Remedial program, it is necessary to continue to supply the affected residents with a temporary, potable water supply (bottled water), to maintain the carbon filtration systems already installed, and to monitor wells in the area for TCE levels.

IV. SUMMARY OF COSTS

	Current Ceiling	Additional Funds	New Ceiling
Extramural Costs			
ERCS Contractor	$ 160,000	$ 128,975	$ 288,975
TAT	150,000	28,000	178,000
Extramural Subtotal	$ 310,000	$ 156,975	$ 466,975
Intramural Costs			
EPA Direct	$ 25,000	-------	$ 25,000
EPA Indirect	55,000	-------	55,000
ERT/HQ	18,000		18,000
Intramural Subtotal	$ 98,000	-------	$ 98,000
Unallocated Funds	28,000	-------	28,000
Total Project Ceiling	**$ 436,000**	**$ 156,975**	**$ 592,975**

V. REGIONAL RECOMMENDATION

The program has already been granted a 12-month exemption from the Assistant Administrator. An identification of the hazardous substances found at the site, and a description of how the site meets the response criteria in 40 CFR 300.415 (formerly 300.65) is fully described in the OSC's earlier request for funding, dated December 1986. See Attachment 1. To assist in eliminating the continuing threat posed to the public and the environment, consistent with the removal criteria contained in the NCP, 40 CFR Section 300.415, I recommend your approval of this $156,975 increase for extramural contractor costs. Your approval will raise the total project ceiling from $436,000 to $592,975, of which $466,975 is for extramural cleanup contractor costs. You may indicate your approval or disapproval by signing below.

Attachment 1

APPROVAL _____ DATE AUG 22 1990

DISAPPROVAL _____ DATE _____

UNITED STATES ENVIR)NMENTAL PROTECTION .GENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

SUBJECT: Continuation of Removal Activites at the Hereford Township Groundwater Site, Berks County, Pennsylvania

DATE: DEC 0 1 1987

FROM: Vincent E. Zenone, On-Scene Coordinator
Emergency Response Section (3HW22)

TO: Gerald T. Heston, On-Scene Coordinator
Removal Response Section (3HW25)

James M. Seif
Regional Administrator (3RA00)

THRU: Stephen R. Wassersug, Director
Hazardous Waste Management Division (3HW00)

ISSUE

Immediate response actions to control and stabilize the site cannot be continued unless an exemption to Section 104 (e) of SARA [104 (c) (1) of CERCLA 1980 as amended] is granted. The one year limit for this site will expire on December 1, 1987.

STATUTORY CRITERIA

Section 104 (e) of SARA [104 (c) (1) of CERCLA 1980 as amended] limits Federal Emergency Response to $2,000,000 and one year, unless the following criteria are met:

1. Continued response actions are immediately required to prevent, limit, or mitigate an emergency.

2. There is an immediate risk to public health or welfare on the environment; and

3. Such assistance will not otherwise be provided on a timely basis.

BACKGROUND

The Envir nmental Protection Agency (EPA), Region III Emergency Response Section initiated a removal action on December 1, 1986, to abate an immediate and substantial threat to public health posed by the presence of high concentrations of trichloroethene (TCE) in the groundwater in Hereford Township, Berks County, PA.

On December 1, 1986, the Regional Administrator approved an immediate Removal Request of $436,000. Approximately $98,000 have been expended from this ceiling to perform the following:

1. The installation, rental, and filter changes of granular activiated carbon systems (iron pre-filter twin carbon cylinders, flowmeter, and ultraviolet light) at the eleven impacted residences.

2. Periodic sampling of residential wells in the immediate vicinity of the impacted residences to determine if contaminants are present or have increased to the point of requiring filtration installation.

3. Measuring the concentrations of volatile organics in the well water (drinking water) of the residences where filter systems have been installed, to determine the operating efficiency of the treatment system and the development of "estimated activated carbon lifetimes" based upon adsorption isotherms, water use, and contaminant concentration data. Samples from between and after carbon filters have been collected to determine contaminant breakthrough.

4. Preliminary site work (Phase III, Feasibility Study) by ERT/REAC, to identify the source and the extent of the contamination plume.

DISCUSSION

The U.S. EPA Environmental Response Team (ERT) is currently conducting a feasibility study (Phase III) of the impacted area to investigate permanent solutions to the problem at the site. Delays in Phase III of this project, resulting from limited manpower resources and in the acquisition of subcontractor services, have postponed the estimated completion date of this project phase until late spring, 1988. The results of the Phase III investigation will be implemented in a Phase IV. The proposed alternative for Phase IV will be addressed in a future funding request. The manner in which the Hereford Township site meets the prescribed criteria are as follows:

1). Continued response actions are immediately required to mitigate an emergency. Approximately seventy families live in the Hereford Township Site; of these seventy residences eleven have been provided activated carbon systems by the OSC. Periodic monitoring of the operation of these filtration systems is required to verify their efficiency. The ongoing maintenance of these filtration systems is critical to provide a safe water supply to the affected residences at the site. In addition, in those residences where filtration systems have not been installed, periodic sampling of their drinking water wells is also essential to ensure that the contaminant levels do not exceed the established action level. If removal actions are terminated prior to the completion of Phases III and IV, the residents may return to drinking, cooking, and showering with the contaminated water, resulting in their exposure to the contaminants present in the groundwater as indicated by the original Action Memorandum.

2). There is an immediate risk to human health. As stated in the original Action Memorandum, The Agency for Toxic Substances and Disease Registry (ATSDR) confirmed that the concentrations of contaminants in drinking water at the site poses a threat to human health. Trichlorothene (TCE), tetrachloroethene (PCE), and methylene chloride are hazardous substances per Section 307 (a) of the Federal Water Pollution Control Act. As suspected carcinogens, these compounds are believed to present excess cancer risks to humans. The two primary routes of exposure for these volatile organic compounds are through ingestion and inhalation.

3). Assistance will not otherwise be provided on a timely basis. Enforcement actions are ongoing. The State of Pennsylvania and Hereford Township are involved with site activities, but neither agency possesses sufficient available funds to take over the measuring, sampling, maintenance of the filter systems required until the completion of Phase IV. The Hereford Township Site is not on the National Priorities List (NPL).

REGIONAL RECOMMENDATION

Based upon the information contained herein, I recommend that you approve an exemption to the one year statutory limit to allow the continuation of removal actions at the Hereford Township Site.

You may indicate your approval or disapproval by signing below. Due to the potential consequences associated with the lapse in removal action at this site, I would appreciate rapid consideration of this proposal.

APPROVAL _____ DATE 12/11/87

DISAPPROVAL _____ DATE _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

SUBJECT: Immediate Removal Request for the Hereford Township Groundwater Contamination Site
Berks County, Pennsylvania

DATE: DEC 1 1986

FROM: Vincent E. Zenone, OSC and Gerald T. Heston, OSC
Emergency Response Section (3HW22)

TO: James M. Seif
Regional Administrator (3RA00)

THRU: Stephen R. Wassersug, Director
Hazardous Waste Management Division (3HW00)

I. PURPOSE

This is an Immediate Removal Request to mitigate the threat to human health presented by the contamination of at least five (5) private drinking water wells located in Hereford Township, Berks County, PA. The threat includes both the ingestion and inhalation of trichloroethene (TCE), at level exceeding the 260 ppb Lifetime Drinking Water Equivalent Level (DWEL). Other volatile organics detected in several wells include tetrachloroethene (PCE) and methylene chloride. The requested funds in the amount of $436,000 to address Phases I, II and III will be used to supply bottled drinking water, to install and maintain individual in-house filtering systems to the affected residences for a period of up to six-months, and to conduct a limited feasibility study to identify a permanent solution.

II. BACKGROUND

Hereford Township (population estimated at 3016) is located in Eastern Berks County, approximately 60 miles northwest of Philadelphia, Pennsylvania. The nearest industries to the site are located in Bally, Pennsylvania (approximately five miles southeast of the township).

In response to citizen complaints in November 1983 concerning the water quality in Hereford Township, tap water samples were taken by Pennsylvania Department of Environmental Resources (PADER) personnel, and EPA's Technical Assistance Team (TAT). Results revealed elevated levels of trichloroethene (TCE) in tap water samples. All residences in this area use private wells. Elevated TCE levels (greater than 5 ppb) were found in eight homes. In six of these homes, TCE concentrations exceeded the DWEL.

In November 1983, the PADER (Norristown) issued advisories to the public regarding water usage. In these advisories they recommended using bottled water, boiling water, or installing carbon filters where TCE concentration exceeded 45 ppb, and abandoning drinking untreated water where TCE concentrations exceeded 100 ppb. A temporary water supply was provided by the National Guard of Pennsylvania through PEMA. The water tank was reclaimed by the National Guard in mid-1985.

In early 1984, the Field Investigation Team (FIT) performed a site assessment of the Crossley Farm Property (thought to be the source of contamination) and adjacent area's groundwater problem. Unable to locate the source, FIT suggested a regional groundwater study be performed. No other actions were taken at that time.

EPA/TAT reassessed the area in September 1986 following a citizen complaint via the Governor's Hotline in August 1986, concerning the continuing water quality problem. TCE levels ranging from 500 to 19,000 ppb were detected in the four tap water samples taken.

III. THREAT

The Hereford Township Groundwater Contamination Site meets the criteria for removal action under NCP Section 300.65 in that there is a potential threat to public health, welfare and/or the environment.

At least six residencies in the area are known to have drinking water contamination with at least 260 ppb of TCE. Other organic contaminations present include tetrachloroethene and methylene chloride. The extent of contamination could spread under the proper groundwater conditions. A summer camp, a trailer park of approximately 20 mobile homes, and five to ten other homes are within a 1/2-mile radius from the affected area (all of which use private wells).

ATSDR gave verbal notification that the presence of these contaminants poses a threat to public health. Trichloroethene (TCE), tetrachloroethene and methylene chloride are hazardous substances as per Section 307(a) of the Federal Water Pollution Control Act. As suspected carcinogens, these compounds are believed to present excess cancer risks to humans. The two primary routes of exposure for these volatile organic compounds are through ingestion and inhalation.

IV. PROPOSED PROJECT AND COSTS

The requested funds will be used in Phase I to distribute bottled water to residences where TCE levels exceed one-half of the DWEL (130ppb). Bottled water will be supplied for a period of up to six months. Further sampling of nearby residential wells to determine the need for additional emergency supplies will also be carried out in Phase I.

Phase II of the proposed action will provide air strippers and carbon filter systems to four (4) residences and provide maintenance for a period of six-months. Two of these residences (with 17,000 and 19,000 ppb of TCE) will be provided with two air strippings units installed sequentially. A nearby residence with high levels of TCE and existing treatment system will be provided with system maintenance for a period of six-months. Sampling will be conducted on a periodic basis to ensure that the systems are functioning properly. The installation of the filter systems is expected to be completed within two weeks.

If the results of the Phase I residential sampling indicate contamination of additional wells, Phase II will provide filter installation and maintenance for six-months.

In Phase III, the OSC will conduct an extent of contamination study to determine the source, and a limited feasibility study to investigate permanent solutions to the problem at the site. The results of the Phase III investigation will be implemented in a Phase IV, which when determined, the proposed alternative will be addressed in a future funding request.

PHASE I

ERCS (bottled water and sample anaylsis)	$35,000
TAT	30,000
EPA	15,000
Contingency (15%)	12,000
Subtotal	$92,000
15% Headquarters	14,000
TOTAL	$106,000

PHASE II

ERCS (installation of treatment systems and maintenance for six-months)	$60,000
TAT	20,000
EPA	10,000
Contingency (15%)	13,000
Subtotal	$103,000
15% Headquarters	15,000
TOTAL	$118,000

PHASE III - Feasibility Study

ERT/EERU	$100,000
TAT	40,000
EPA	20,000
Contingency (15%)	24,000
Subtotal	$184,000
15% Headquarters	28,000
TOTAL	$212,000

TOTAL FUNDING REQUEST (Phases I, II, III) $436,000

V. CONTRIBUTION TO EFFICIENT PERFORMANCE

The proposed removal action addresses the threat of groundwater contamination efficiently by considering the overall site cleanup. Any actions to provide portable water, such as bottled water and carbon filters, are an integral part of a total cleanup of the site. The OSC intends that all actions will be consistent with long-term remedial measures as far as practical.

VI. ENFORCEMENT

At this time, there are no potential responsible parties evident, however, the OSC will continue to cooperate with Removal Enforcement personnel in this area.

VII. REGIONAL RECOMMENDATION

Because conditions at the Hereford Township Groundwater Contamination Site meet the criteria set forth in Section 300.65 of the National Contingency Plan, I recommend your approval of this removal request. The estimated costs are $436,000, of which $385,000 are extramural costs.

You may indicate your approval or disapproval by signing below.

APPROVAL _____ DATE 10/1/86

DISAPPROVAL _____ DATE _____